(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



| DEEX CONTINUE DECINE NOT LETTE CARD IN 11 NOTE 1810 AND 1811 AND A CONTINUE CONTINUE CONTINUE CONTINUE CONTI

(43) International Publication Date 3 November 2005 (03.11.2005)

PCT

(10) International Publication Number WO 2005/104573 A1

(51) International Patent Classification7:

H04Q 7/20

(21) International Application Number:

PCT/US2004/013202

(22) International Filing Date:

30 April 2004 (30.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/559,545

5 April 2004 (05.04.2004) US

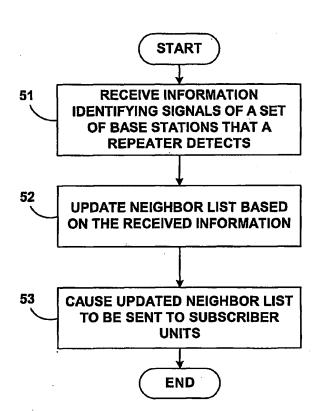
- (71) Applicant (for all designated States except US): QUAL-COMM INCORPORATED [US/US]; 5775 Morehouse Drive, San Diego, CA 92121 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): BAKER, Kenneth R. [US/US]; 8119 Kincross Way, Boulder, CO 80301 (US). WHEATLEY, Charles E., III [US/US]; 570 Torrey Point

Road, Del Mar, CA 92014 (US). WILLIS, Dan [US/US]; 466 Cougar Court, Lafayette, CO 80026 (US). SHEYN-BLAT, Leonid [US/US]; 110 Reservoir Road, Hillsboro, CA 94010 (US).

- (74) Agents: MINHAS, Sandip et al.; 5775 Morehouse Drive, San Diego, CA 92121 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: REPEATER THAT REPORTS DETECTED NEIGHBORS



(57) Abstract: This disclosure is directed to a repeater (Fig. 1, item 14) and base station control device (Fig. 1, item 18) implemented in a wireless communication system (Fig. 1, item 10). The repeater includes a control unit capable of detecting signals sent from various base stations (Fig. 1, item 12A-12C) in the wireless communication system. In accordance with this disclosure, the repeater identifies a set of base stations that it can detect, and then sends information indicative of the set of base stations that the repeater can detect to a specific base station that gets repeated by the repeater. In this manner, the repeater can be used to help assess network topology. The base station control device receives the information from the base station and can use the information to update a neighhor list.

WO 2005/104573 A1

WO 2005/104573 A1



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

 as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for all designations as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii)) for all designations

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.